PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: CA Climate Zone 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ Relocatable - indicate ☐ High-Rise Residential ☐ specific climate zone ☐ Hotel/Motel Guest Room ☐ all climates
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.

The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author

Name: Mark Baskin — Signature: [signature]
Company: Mechanical Design Concepts, Inc — Date: 1/5/2012
Address — Phone
City/State/Zip

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

ENV.	LTG.	MECH.	
☐	☐	☐	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
☐	☐	☐	I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
☐	☐	☐	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1

Principal Envelope Designer

Name: Danny Ordiz — Signature: [signature]
Company: Ordiz Melby Architects — Date: 1.5.12
Address: 5500 Ming Avenue, Suite 280 — License #: C-14728
City/State/Zip: Bakersfield, CA 93309 — Phone: (661) 832-5258

Principal Mechanical Designer

Name: Mark Baskin, P.E., LEED AP — Signature: [signature]
Company: Mechanical Design Concepts, Inc. — Date: 1-6-12
Address: 1060 W Sierra, Suite 101 — License #: M26578
City/State/Zip: Fresno, California 93711 — Phone: (559) 437-0376, ext 3

Principal Lighting Designer

Name — Signature
Company — Date
Address — License #
City/State/Zip — Phone

INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)

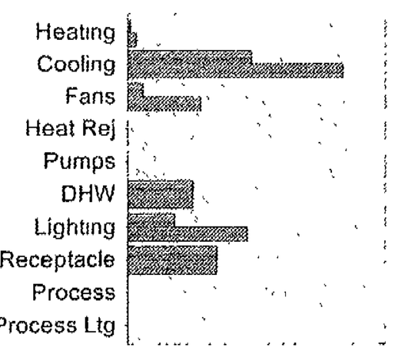
☑	ENV-1C	Certificate of Compliance. Required on plans	☑	MECH-1C	Certificate of Compliance. Required on plans.
☑	LTG-1C	Certificate of Compliance. Required on plans	☑	MECH-2C	Air/Water Side/Service Hot Water & Pool Requirements.
☐	LTG-2C	Lighting Controls Credit Worksheet.	☑	MECH-3C	Mechanical Ventilation and Reheat
☐	LTG 3C	Indoor Lighting Power Allowance	☑	MECH-5C	Mechanical Equipment Details.

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)

Energy Component	Standard Design	Proposed Design	Compliance Margin
Space Heating	5.63	1.52	4.11
Space Cooling	133.40	76.15	57.25
Indoor Fans	45.38	9.54	35.83
Heat Rejection	0.00	0.00	0.00
Pumps & Misc.	0.32	0.00	0.32
Domestic Hot Water	40.36	40.36	0.00
Lighting	73.48	29.03	44.44
Receptacle	55.53	55.53	0.00
Process	0.00	0.00	0.00
Process Lighting	0.00	0.00	0.00
TOTALS	354.09	212.13	141.96
Percent better than Standard		40.1 %	(40.1 % excluding process)



BUILDING COMPLIES

GENERAL INFORMATION

Building Orientation	(N) 0 deg	Conditioned Floor Area	8,360 sqft.
Number of Stories	1	Unconditioned Floor Area	0 sqft.
Number of Systems	4	Conditioned Footprint Area	8,360 sqft.
Number of Zones	11	Natural Gas Available On Site	Yes

	Orientation	Gross Area	Glazing Area	Glazing Ratio
Front Elevation	(N)	1,888 sqft	225 sqft	11.9 %
Left Elevation	(E)	840 sqft	0 sqft.	0.0 %
Rear Elevation	(S)	2,008 sqft	225 sqft	11.2 %
Right Elevation	(W)	720 sqft	0 sqft	0.0 %
Total		5,456 sqft.	450 sqft	8.2 %
Roof		8,360 sqft.	96 sqft.	1.1 %

	Standard		Proposed	
Prescriptive Lighting Power Density	1.189	W/sqft.	0.470	W/sqft.
Prescriptive Envelope TDV Energy	248,782		164,509	

Prescriptive Values for Comparison only. See LTG-1C for allowed LPD.

Remarks:

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

ZONE INFORMATION

System Name	Zone Name	Occupancy Type	Floor Area (sqft.)	Inst. LPD (W/sf)[1]	Ctrl Credits (W/sf)[2]	Allowed LPD Area (W/sf)[3]	Allowed LPD Tailored (W/sf)[1]	Proc Loads (W/sf)
HP F-1	Classroom 100	Classroom, Lecture, Training	963	*0.470				
	Classroom 101	Classroom, Lecture, Training	963	*0.470				
	Classroom 102	Classroom, Lecture, Training	963	*0.470				
	Classroom 103	Classroom, Lecture, Training	963	*0.470				
	Work Room 108	Classroom, Lecture, Training	240	*0.470				
HP F-2	Classroom 104	Classroom, Lecture, Training	963	*0.470				
	Classroom 105	Classroom, Lecture, Training	963	*0.470				
	Classroom 106	Classroom, Lecture, Training	963	*0.470				
	Classroom 107	Classroom, Lecture, Training	963	*0.470				
	Work Room 109	Classroom, Lecture, Training	240	*0.470				
CU/FC F-1, 2	Electrical Rooms	Electrical, Mechanical Room	176	*0.470				

Notes: 1 See LTG-1C (items marked with asterisk, see LTG 1-C by others) 2. See LTG-2C 3 See LTG-3C (by others) 4 See LTG-4C — Items above require special documentation

EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

The HVAC System HP F-1 includes Demand Control Ventilation per Standards Section 121.
The HVAC System HP F-2 includes Demand Control Ventilation per Standards Section 121
The HVAC System PUHY-P192 Run as Standard Heat Pump includes a Variable Speed Drive on the Fan
The Roof R-0 Roof Cathedral w/R-30 Sarna Therm Reflectance = 0.72. Emittance = 0.90 shall be rated and labeled by the Cool Roof Rating Council in ac

The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.

Authorized Signature or Stamp ____________

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS / INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring[3]	Interior R-Value	Interior Furring[3]	Joint Appendix 4	Condition Status	Pass	Fail[2]
1	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
2	Wall	334	(N)	0.069	R-21					4.3.1-A6	New	☐	☐
3	Door	42	(N)	0.500	Insul					4.5.1-A3	New	☐	☐
4	Wall	360	(W)	0.069	R-21					4.3.1-A6	New	☐	☐
5	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
6	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
7	Wall	334	(N)	0.069	R-21					4.3.1-A6	New	☐	☐
8	Door	42	(N)	0.500	Insul					4.5.1-A3	New	☐	☐
9	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
10	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail[2]
1	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
2	Window	225	(N)	0.290	COG	0.270	COG	☑	New	☐	☐
3	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
4	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
5	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
6	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
7	Window	225	(S)	0.290	COG	0.270	COG	☑	New	☐	☐
8	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
9	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐
10	Skylight	12	(N)	0.550	NFRC	0.200	NFRC	☐	New	☐	☐

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS / INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring[3]	Interior R-Value	Interior Furring[3]	Joint Appendix 4	Condition Status	Pass	Fail[2]
11	Wall	334	(N)	0.069	R-21					4.3.1-A6	New	☐	☐
12	Door	42	(N)	0.500	Insul					4.5.1-A3	New	☐	☐
13	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
14	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
15	Wall	334	(N)	0.069	R-21					4.3.1-A6	New	☐	☐
16	Door	42	(N)	0.500	Insul					4.5.1-A3	New	☐	☐
17	Wall	360	(E)	0.069	R-21					4.3.1-A6	New	☐	☐
18	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
19	Roof	240	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
20	Slab	240	(N)	0.730	None					4.4.7-A1	New	☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance.

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail[2]
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐

1. See Instructions in the Nonresidential Compliance Manual, page 3-96
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS / INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring[3]	Interior R-Value	Interior Furring[3]	Joint Appendix 4	Condition Status	Pass	Fail[2]
21	Roof	951	(N)	0.079	None	30.6	None			4.2.2-A1	New	☐	☐
22	Wall	334	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
23	Door	42	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
24	Wall	360	(W)	0.069	R-21					4.3.1-A6	New	☐	☐
25	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
26	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
27	Wall	334	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
28	Door	42	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
29	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
30	Roof	951	(N)	0.020	None	30.6	None			4.2.2-A1	New	☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96.
2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail[2]
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS / INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring[3]	Interior R-Value	Interior Furring[3]	Joint Appendix 4	Condition Status	Pass	Fail[2]
31	Wall	334	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
32	Door	42	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
33	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
34	Roof	951	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
35	Wall	334	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
36	Door	42	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
37	Wall	360	(E)	0.069	R-21					4.3.1-A6	New	☐	☐
38	Slab	963	(N)	0.730	None					4.4.7-A1	New	☐	☐
39	Roof	240	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
40	Slab	240	(N)	0.730	None					4.4.7-A1	New	☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96
2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail[2]
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg ☑ Conditioned Spaces ☐ Unconditioned Spaces
☐ Skylight Area for Large Enclosed Space ≥ 8000 ft² (If checked include the ENV-4C with submittal)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☑ Overall Envelope ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS / INSULATION

Tag/ID	Assembly Type	Area (ft²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring[3]	Interior R-Value	Interior Furring[3]	Joint Appendix 4	Condition Status	Pass	Fail[2]
41	Roof	176	(N)	0.029	None	30.6	None			4.2.2-A1	New	☐	☐
42	Wall	160	(N)	0.069	R-21					4.3.1-A6	New	☐	☐
43	Wall	118	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
44	Door	21	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
45	Door	21	(S)	0.500	Insul					4.5.1-A3	New	☐	☐
46	Wall	120	(E)	0.069	R-21					4.3.1-A6	New	☐	☐
47	Wall	120	(S)	0.069	R-21					4.3.1-A6	New	☐	☐
48	Slab	176	(N)	0.730	None					4.4.7-A1	New	☐	☐
												☐	☐
												☐	☐

1 See Instructions in the Nonresidential Compliance Manual, page 3-96
2 If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail[2]
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐
								☐		☐	☐

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

ROOFING PRODUCT (COOL ROOFS)

(Note if the roofing product is not CRRC certified, this compliance approach cannot be used). Go to Overall Envelope Approach or Performance Approach.

CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENTS:	Pass	Fail[1]	N/A
☐ Roofing compliance not required in Climate Zones 1 and16 with a Low-Sloped 2:12 pitch or less	☐	☐	☐
☐ Roofing compliance not required in Climate Zone 1 with a Steep-Sloped with less than 5 lb/ft² Greater than 2:12 pitch	☐	☐	☐
☐ Low-sloped Wood framed roofs in Climate Zones 3 and 5 are exempted, solar reflectance and thermal emittance or SRI that have a U-factor of 0.039 or lower. See Opaque Surface Details roof assembly, Column H of ENV 2C	☐	☐	☐
☐ Low-sloped Metal building roofs in Climate Zone 3 and 5 are exempted, solar reflectance and thermal emittance or SRI that have a U-factor of 0.048 or lower. See Opaque Surface Details roof assembly below, Column H of ENV-2C.	☐	☐	☐
☐ The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempted. Solar reflectance and thermal emittance or SRI, see spreadsheet calculator at www.energy.ca.gov/title24/	☐	☐	☐
☐ Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft² are exempt from the Cool Roof criteria below.	☐	☐	☐
☐ High-rise residential buildings and hotels and motels with low-sloped roofs in Climate Zones 1 through 9, 12 and 16 are exempted from the low-sloped roofing criteria.	☐	☐	☐

1. If Fail then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

CRRC Product ID Number[1]	Roof Slope ≤ 2:12	Roof Slope > 2:12	Product Weight < 5lb/ft²	Product Weight ≥ 5lb/ft²	Product Type[2]	Aged Solar Reflectance[3]		Thermal Emmitance	SRI[5]	Pass	Fail[6]
R-0 Roof Cathedral w	☑	☐	☑	☐		☐[4]	0.72	0.90		☐	☐
	☐	☐	☐	☐		☐[4]				☐	☐
	☐	☐	☐	☐		☐[4]				☐	☐
	☐	☐	☐	☐		☐[4]				☐	☐
	☐	☐	☐	☐		☐[4]				☐	☐
	☐	☐	☐	☐		☐[4]				☐	☐

1 The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at www.coolroofs.org/products/search.php
2. Indicate the type of product is being used for the roof top i.e. single-ply roof, asphalt roof, metal roof, etc
3 If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation $(0.2+0.7(\rho_{initial} - 0.2))$ to obtain a calculated aged value. Where ρ is the Initial Solar Reflectance from the Cool Roof Rating Council's Rated Product Directory
4 Check box if the Aged Reflectance is a calculated value using the equation above
5 The SRI value needs to be calculated from a spreadsheet calculator at http://www.energy.ca.gov/title24/
6. If Fail then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary

To apply **Liquid Field Applied Coatings**, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:

☐ Aluminum-Pigmented Asphalt Roof Coating ☐ Cement-Based Roof Coating ☐ Other ____

Discrepancies:

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 3) ENV-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for Envelope Fenestrations system. The designer is required to check the acceptance tests and list all the fenestration products that require an acceptance test. If all the site-built fenestration of a certain type requires a test, list the different fenestration products and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:

Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or whenever new fenestration is installed in the building or space shall be certified as meeting the Acceptance Requirements. The ENV-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the ENV-2A for each different fenestration product line must be provided to the owner of the building for their records.

Test Description: Fenestration Products Name or ID Requiring Testing or Verification	Area of like Products	ENV-2A Building Envelope Acceptance Test	Test Performed By:
Sola-Tube 750 DS	96	☑	
PPG 70XL (2) Starphire Low E	450	☑	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	

CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Installation Certificate, LTG-1- INST (Retain a copy and verify form is completed and signed.) — **Field Inspector** ☐
Certificate of Acceptance, LTG-2A and LTG-3A (Retain a copy and verify form is completed and signed.) — **Field Inspector** ☐

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces Installed Lighting Power listed on this Lighting Schedule is only for:

☑ CONDITIONED SPACE ☐ UNCONDITIONED SPACE
☑ The actual indoor lighting power listed below includes all installed permanent and portable lighting systems in accordance with §146(a)
☑ Only for offices: Up to the first 0.2 watts per square foot of portable lighting shall not be required to be included in the calculation of actual indoor lighting power density in accordance with the Exception to §146(a). All portable lighting in excess of 0.2 watts per square foot is totaled below.

A: None or Item Tag	B: Complete Luminaire Description[1] (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballasts)	C	D: Watts per Luminaire[1]	E: CEC Default From NA8	E: According To §130 (d or e)	F: Number of Luminaires	G: Installed Watts (D X F)	H: Field Inspector Pass	H: Fail
	Designed Allowance 176 sqft at 0.470 w/sf			☐	☐		83	☐	☐
	Designed Allowance: 240 sqft at 0.470 w/sf			☐	☐		113	☐	☐
	Designed Allowance 240 sqft at 0.470 w/sf			☐	☐		113	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
	Designed Allowance: 963 sqft at 0.470 w/sf			☐	☐		453	☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
				☐	☐			☐	☐
						Installed Watts Page Total:	3,929		

Building total number of pages: ____ — Installed Watts Building Total (Sum of all pages) Enter into LTG-1C Page 4 of 4: 3,929

1 Wattage shall be determined according to Section 130 (d and e). Wattage shall be rating of light fixture, not rating of bulb
2 If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

CERTIFICATE OF COMPLIANCE (Part 2 of 3) LTG-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Fill in controls for all spaces: a) area controls, b) multi-level controls, c) manual daylighting controls for daylit areas > 250 ft², automatic daylighting controls for daylit areas > 2,500 ft², d) shut off controls, e) display lighting controls, f) tailored lighting controls – general lighting controlled separately from display, ornamental and display case lighting and g) demand responsive automatic controls for retail stores > 50,000 ft², in accordance with Section 131.

MANDATORY LIGHTING CONTROLS – FIELD INSPECTION ENERGY CHECKLIST

Type/ Description	Number of Units	Location in Building	Special Features	Field Inspector Pass	Fail
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of LTG-1C)

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted

Field Inspector's Notes or Discrepancies:

CERTIFICATE OF COMPLIANCE (Part 3 of 3) LTG-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012

CONDITIONED AND UNCONDITIONED SPACE LIGHTING MUST NOT BE COMBINED FOR COMPLIANCE

Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
Installed Lighting (from Conditioned LTG-1C, Page 2)		3,929	Installed Lighting (from Unconditioned LTG-1C Page 2)		0
Lighting Control Credit Conditioned Spaces (from LTG-2C)	-	0	Lighting Control Credit Unconditioned Spaces (from LTG-2C)	-	0
Adjusted Installed Lighting Power	=	3,929	Adjusted Installed Lighting Power	=	0
Complies if Installed ≤ Allowed		↕	Complies if Installed ≤ Allowed		↕
Allowed Lighting Power Conditioned Spaces (from LTG-3C or PERF-1)		3,929	Allowed Lighting Power Unconditioned Spaces (from LTG-3C)		0

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system, **LTG-2A and LTG-3A.** The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. **Forms can be grouped by type of Luminaire controlled.**

Enforcement Agency:

Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The **LTG-2A and LTG-3A** forms are not considered complete forms and are not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the **LTG-2A and LTG-3A** for each different lighting luminaire control(s) must be provided to the owner of the building for their records

Luminaires Controlled

Equipment Requiring Testing	Description	Number of Luminaires controlled	Location	LTG-2A and LTG-3A Controls and Sensors and Automatic Daylighting Controls Acceptance
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C

Project Name: BCSD School Bld F Classrooms — Date: 1/5/2012
Project Address: Bakersfield — Climate Zone: 13 — Total Cond. Floor Area: 8,360 — Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room
☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☑ Conditioned Spaces ☐ Unconditioned Spaces (affidavit)
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Approach of Compliance: ☐ Component ☐ Overall Envelope TDV Energy ☐ Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees: 0 deg

HVAC SYSTEM DETAILS

Equipment[2]	Inspection Criteria	Pass	Fail – Describe Reason[2]
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	HP F-1	☐	☐
Equipment Type[3]	Packaged VAV	☐	☐
Number of Systems	1	☐	☐
Max Allowed Heating Capacity[1]	200,000 Btu/hr	☐	☐
Minimum Heating Efficiency[1]	3.20 COP	☐	☐
Max Allowed Cooling Capacity[1]	192,000 Btu/hr	☐	☐
Cooling Efficiency[1]	10.6 EER	☐	☐
Duct Location/ R-Value	Attic, Roof Ins / 4.2	☐	☐
When duct testing is required, submit MECH-4A & MECH-4-HERS	No	☐	☐
Economizer	Diff. Temp (Integrated)	☐	☐
Thermostat	Setback Required	☐	☐
Fan Control	Variable Speed	☐	☐

Equipment[2]	Inspection Criteria	Pass	Fail – Describe Reason[2]
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	HP F-2	☐	☐
Equipment Type[3]	Packaged VAV	☐	☐
Number of Systems	1	☐	☐
Max Allowed Heating Capacity[1]	200,000 Btu/hr	☐	☐
Minimum Heating Efficiency[1]	3.20 COP	☐	☐
Max Allowed Cooling Capacity[1]	192,000 Btu/hr	☐	☐
Cooling Efficiency[1]	10.6 EER	☐	☐
Duct Location/ R-Value	Attic, Roof Ins / 4.2	☐	☐
When duct testing is required, submit MECH-4A & MECH-4-HERS	No	☐	☐
Economizer	Diff. Temp (Integrated)	☐	☐
Thermostat	Setback Required	☐	☐
Fan Control	Variable Speed	☐	☐

(Field Inspection Energy Checklist — Meets Criteria or Requirements)

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked
3 Indicate Equipment Type: Gas (Pkg or, Split) VAV, HP (Pkg or split), Hydronic, PTAC, or other.

APPROVED
DIVISION OF STATE ARCHITECT
HIGH PERFORMANCE SECTION
APP.# ____ DATE 1-18-12
[signature]

MDC
MECHANICAL DESIGN CONCEPTS, INC.
5500 Ming Ave, Suite 251 — Bakersfield, CA 93309
Tel #: (661) 397-2114 — FAX #: (661) 397-2116
Job: 09091 — Plt: 1-11-12

REGISTERED PROFESSIONAL ENGINEER — MARK JAMES BASKIN — No M26578 — Exp. 9-30-12 — MECHANICAL — STATE OF CALIFORNIA

ORDIZ MELBY
ARCHITECTS, INC.
5500 MING AVENUE SUITE 280
BAKERSFIELD, CALIFORNIA 93309
TELEPHONE (661) 832-5258
FACSIMILE (661) 832-4291

LICENSED ARCHITECT — DANNY ESPINEDA ORDIZ — No. C-14728 — MAY 31, 2013 RENEWAL DATE — STATE OF CALIFORNIA

DANNY E. ORDIZ, AIA
ARCHITECT C-14,728

WILLIAM J. MELBY, AIA
ARCHITECT C-16,835

IDENTIFICATION STAMP
DIVISION OF STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. #:02-112027
FILE #: 15-6
AC — FLS [initials] SS [initials]
DATE 1/18/12

PTN # 63321-112

NEW ELEMENTARY SCHOOL
9801 HIGHLAND KNOLLS DR
BAKERSFIELD
CALIFORNIA
93306

NEW MIDDLE SCHOOL
4115 VINELAND ROAD
BAKERSFIELD
CALIFORNIA
93306

FOR:

BAKERSFIELD CITY SCHOOL DISTRICT
1300 BAKER STREET
BAKERSFIELD
CALIFORNIA
93305

MARK	DATE	DESCRIPTION
△		
△		
△		
△		
△		

JOB NUMBER: 200101244
CAD DRAWING FILE:
DRAWN BY: KW
CHECKED BY: MB

CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH THE WORK. REPORT DISCREPANCIES TO THE ARCHITECT.

THE DRAWINGS, IDEAS, AND DESIGNS REPRESENTED ON THIS SHEET ARE THE PROPERTY OF THE ARCHITECT.

SHEET TITLE

TITLE 24 BUILDING "F"

SHEET IDENTIFICATION NUMBER

M-524